

straminea, spathulato- v. obovato-oblonga, obtusa, integerrima, vel apicem versus obsolete crenulata. Stamina 30-45 : filamenta libera v. pentadelpa, ovarium sericeum vel tomentosum. Stylus glaber vel basi barbatus, post anthesin 2 lineas longus. Stigmata obtusa, demùm sæpè patentia. Nux 2-4 lineas alta, diametro  $\frac{1}{2}$ -3-lineari; costæ plus minusve prominentes, sæpissime crassæ. Semen ovatum v. obovatum, fusco-castaneum.

Habitat in Europâ, præsertim mediâ et australiori. Parisiis florescit medio Junio : individua tamen reperiuntur singula jam initio Junii vel tantum initio Julii florida.

LIII.—*General Features of Chusan, with remarks on the Flora and Fauna of that Island.* By THEODORE CANTOR, M.D., Bengal Medical Service, &c.

[Continued from p. 370.]

*Animals observed at Chusan.*

1. MAMMALIA.

CHEIROPTERA.

\**Vespertilio irretitus*†. V. auriculis capite brevioribus, rotundatis; trago lanceolato; rostro brevi, obtuso, nigro; labiis mentoque crinibus longioribus sparsim tectis; vellere dorsi capitisque molli, brevi, griseo-brunnescenti, abdominis pulvericolore; membro virili maximo; caudâ corpus longitudine æquante, e membranâ interfemorali, subtus sparsim hirsutâ, paululum exsertâ.

Ears rounded, shorter than the head; tragus lanceolate; muzzle short, obtuse, black, the lips and chin with scattered, lengthy, bristly hairs; fur of the back and head short, soft brownish gray, that of the abdomen dust-coloured; male genital organ highly developed; tail as long as the body, slightly protruding from the interfemoral membrane, the abdominal surface of which is thinly covered with short hair.

*Dentition* :—Incis.  $\frac{2-2}{3-3}$ ; canin.  $\frac{1-1}{1-1}$ ; molar.  $\frac{4-4}{5-5}$ .

| DIMENSIONS.          |       | inch.          | lin.           |
|----------------------|-------|----------------|----------------|
| Length of the head   | ..... | $\frac{1}{2}$  | 0              |
| ————— body           | ..... | $1\frac{1}{2}$ | 1              |
| ————— tail           | ..... | 1              | 1              |
| ————— ear            | ..... | 0              | $2\frac{1}{2}$ |
| Breadth of the ear   | ..... | 0              | 2              |
| Length of the tragus | ..... | 0              | 1              |
| Extent of the wings  | ..... | 8              | 0              |

\* Animals marked with an asterisk have been sketched at Chusan in 1840 by Dr. Cantor, who has supplied the names unless otherwise observed.

† *Irretire*, from its being frequently arrested in the strong web of two large spiders, *Epeïra bilineata* and *heraldica* (vide infra), which circumstance has given rise to the common erroneous belief that those and similar spiders feed upon bats.

CANINA.

*Canis sinensis*, Auct.

FELINA.

*Felis domesticus*, Auct.

\**Felis* ——— ?

EDENTATA.

*Manis pentadactyla*, Linn.

PACHYDERMATA.

*Sus* (var. *sinensis* Auctor.).

\**Equus caballus*, Auct.

—— *asinus*.

RUMINANTIA.

\**Capra*.

\**Bos taurus*, Auct.

2. AVES†.

PASSERINÆ.

Dentirostres.

*Lanius erythronotus*, Vigors.

*Dicrurus balicassius*, Vieillot.

*Turdus merula*, Auct.

*Philedon* ——— ?

*Sylvia hippolaïs*, Temminck.

Fissirostres.

*Hirundo erythrogygia*, Sykes.

Conirostres.

*Pyrgita montana*, Auct.

*Pastor cristatellus*, Temm.

*Pica vulgaris*, Auct.

Syndactyles.

*Alcedo bengalensis*, Gmelin.

GRALLÆ.

Cultirostres.

*Ardea* ——— ?

3. REPTILIA.

CHELONIA.

\**Trionyx tuberculatus*. T. testâ triste olivaceâ, ocellis nigris tuberculisque crebris tectâ; infrâ albo-viridescens; laminis osseis quatuor.

Dark olive; carapace with ocellated black spots and numerous tubercles; beneath greenish white; four callosities.

\**Emys muticus*. E. testâ fuscâ; fasciâ lætè flavâ pone oculos notatus; sterno scutis duodecim composito, fusco-maculatis.

The shell brown; behind the eyes a bright yellow band. Sternum composed of twelve plates, with brown spots.

SAURIA.

\**Hemidactylus nanus*. H. supernè cinereus, strigis sagittalibus nigris 5—6; caudâ annulis 6—7 ejusdem coloris cinctâ. Infrâ margaritaceus.

Gray above, with five to six black arrow-shaped marks, and six to seven rings of the same colour on the tail. Beneath pearl-coloured.

\**Tiliqua rufo-guttata*. T. supernè ænea, lineis serratis nigris quatuor ornatâ; lateribus pallide flavis, rubro permaculatis; abdomine pallide flavo.

Bronze-coloured above, with four black zigzag lines; the sides pale yellow, with numerous red spots. Beneath pale yellow.

OPHIDIA.

a. Venomous.

\**Naja atra*. N. supernè atro-iridescens, lineis duplicibus transversalibus flavis cincta; abdomine in nonnullis margaritaceo, in aliis schistoso.

Iridescent black, with a number of distant transversal double lines

† Identified by Edward Blyth, Esq.

of a yellow colour. The abdominal surface in some of a pearl, in others of a slaty colour.

b. Innocuous.

\**Lycodon rufo-zonatus*. L. supernè brunneus fasciis pluribus transversalibus rubris ornatus; superficie abdominali margaritaceâ, caudali nigro-maculatâ. 193 + 72.

Brown, with numerous transversal crimson bands; the abdominal surface pearl-coloured, spotted with black on the tail.

\**Coluber dhumnades*. C. supernè niger, fasciâ flavâ mediâ, similibus duabus utrinque anticè inclusus; abdomine schistoso. 189 + 98, 199 + 92.

Black, with a longitudinal yellow band in the middle and two on either side, terminating with the anterior half of the back; the abdominal surface of a bluish black colour.

\**Coluber mandarinus*. C. supernè lætè scarlatinus, rhombulis flavis, oris nigris albo-marginatis, crebro ornatus, guttis nigris irregularibus albo-marginatis utrinque inclusus; scutis abdominalibus margaritaceis, alternè nigris. 222 + 63.

Bright scarlet above, with numerous yellow lozenges, surrounded with broad black brims, relieved with white edges; on either side a number of small irregular black marks edged with white; the abdominal surface pearl-coloured, chequered with black.

\**Tropidonotus rufodorsatus*. T. (scutis lævibus tectus) suprâ brunneo-cinereus, fasciis quatuor nigris anticè interruptis seriebusque tribus summis rubro-marginatis; subtùs lætè flavus alternè niger. 178 + 52.

(Covered with *smooth* scales.) Brownish gray above, with four longitudinal black, on the anterior part interrupted, bands, and the three upper rows of scales on the back edged with red; beneath gamboge chequered with black.

*Python Schneideri*, Merrem.

BATRACHIA.

\**Rana temporaria*, var. R. supernè brunneo-viridis; superficie internâ femorum parcè nigro-maculatâ; infrâ pallidè flava.

Brownish green above, with a few dark spots on the inner surface of the thigh; pale yellow beneath.

\**Rana esculenta*, var. R. supernè brunneo-viridis, lineis tribus pallidè flavis, æquidistantibus, fasciisque pluribus irregularibus nigris ornata; abdomine flavo albescenti.

Brownish green above, with three parallel faint yellow lines, and a number of irregular black transversal bands. The abdominal surface whitish yellow.

\**Hyla arborea*, var. H. supernè aureo-viridis, lineâ laterali nigrâ utrinque inclusa; subtùs albo-flavescentis.

Golden green above, with a brownish black lateral line; beneath yellowish white.

\**Bufo gargarizans*. B. supernè brunneo-canescens, tuberculis conicis magnis, nigro-acuminatis tectus; lateribus violaceo-canescentibus; abdomine albescenti nigro-maculato.

Grayish brown above, with numerous large conical tubercles with black points; the sides grayish lilac; the abdominal surface buff, speckled with black.

## 4. PISCES.

## ACANTHOPTERYGII.

## Pharynginæ labyrinthiformes.

*Anabas scandens*, Cuv.

\**Macropodus ocellatus*. M. brunneus, lateribus violaceis, post-operculo nigro ocellato; alâ dorsali analique longissimâ ejusdem ferè magnitudinis, rufâ, ærugine marginatâ necnon punctatâ, radiatorum mollium apicibus nigris; alâ caudali latè lanceolatâ, scarlatinâ ærugine maculatâ.

D. 17 + 8; C. 12; A. 20 + 12; V. 1 + 5; P. 11; Br. 4.

Habitat. Streamlets and canals.

Brownish, with lilac sides, and a black ocellated spot on the gill-cover; the dorsal and anal fins very elongated, nearly of equal size, of a reddish colour edged and spotted with verdigris; their soft rays with black points; the caudal fins broad, lanceolate, of scarlet colour with verdigris spots.

\**Ophicephalus argus*. O. dorso lateribusque viridi-brunnescentibus, abdomine albo-rufescenti, ocellis crebris nigris lateralibus, supra lineam lateralem albo-marginatis; pinnis flavis, nigro-maculatis.

D. 49; C. 14; A. 33; V. 1 + 5; P. 16; Br. 5.

Habitat. Streamlets, estuaries.

Brownish green back and sides, reddish white abdomen. Numerous black ocellated spots edged with white above the lateral line; fins yellow, spotted with black.

## MUGILIDÆ.

*Mugil cephalotus*, Cuv.

Habitat. Estuaries and sea.

## GOBIOIDES.

\**Periophthalmus modestus*. P. brunneus, cinereo marmoratus; abdomine albo-cærulescenti, alis pallidè flavis; dorsali anteriori fasciis nigris duabus ornatâ; radiis alarum nigro-punctatis.

D. 15 + 1.12; C. 13; A. 1 + 11; V. 1 + 5; P. 11; Br. 2.

Habitat. Along the coasts and banks of canals.

Brownish marbled with gray, minutely spotted with black. Abdomen bluish white. Fins faint yellow. The first dorsal with two black bands, the second with a black band and the rays with black spots. The caudal, ventral and pectoral with similar spots.

\**Eleotris flammans*. E. supernè violaceo-brunneus; alâ dorsali anteriori fasciis tribus undulatis violaceis, flammeo-marginatâ; posteriore fasciis undulatis quatuor nigris, radiis alarum aurantiacis, apicibus nonnullis flammeis, aliis nigris; alâ caudali violaceo-canescenti, fasciis tribus cæruleis, radiatorum flavorum apicibus flavis; alâ anali aurantiacâ, fasciis quinque nigris undulatis, radiatorum brunne-

orum apicibus nigris; alis ventralibus pectoralibusque pallidè violaceis, radorum flavorum apicibus nigris.

D. 6 + 1·10; C. 15; A. 1 + 9; V. 1 + 5; P. 18; Br. 6.

Habitat. Canals, estuaries.

Dark lilac brown above; the dorsal fins with orange spines and rays, the anterior with three waved lilac bands and with flame-coloured margin; the second with four waved black bands; the extremities of the rays partly black, partly flame-coloured. The caudal grayish lilac, with three blackish blue arched bands; rays yellow, with black extremities. Anal orange-coloured, with five waved black bands; brown rays with black extremities; the pectorals with five arched black dotted lines.

#### MALACOPTERYGII.

##### Cyprinidæ.

\**Cyprinus gibelioides*. C. suprâ viridi-nigrescens, scutis lateralibus majoribus argenteo-viridibus, viridi-nigrescenti marginatis, squamis infra lineam lateralem argenteis obliteratis; pinnarum radiis flavis, apicibus nigris.

D. 2 + 18; C. 19; A. 2 + 5; V. 9; P. 15; Br. 3.

Habitat. Streamlets, canals, estuaries.

Dark green above. The large scales on the sides silvery green, edged with dark green; below the lateral line the scales are silvery, indistinct; the rays of the fins yellow with black extremities.

*Cyprinus auratus*, Linn.

*Leuciscus (Cyprinus) daniconius*, Hamilton. Hab. Streamlets, canals.

\**Cobitis anguillicaudata*. C. supra lineam lateralem, flava, olivaceo-maculata, infra cinerea nigro-maculata; abdomine flavo; pinnarum radiis flavis, nigro-punctatis, apicibus rubris; pinnâ caudali longissimâ, cirrhis decem.

D. 9; C. 9; A. 7; V. 6; P. 10; Br. 3.

Habitat. Ponds, streamlets, canals.

Yellow, with olive-brown clouded spots above the lateral line; below the latter gray, minutely spotted with black. Abdomen yellow. The fin rays yellow, spotted with black, and with red extremities. The caudal fin much elongated. Cirrhi 10.

##### ESOCIDÆ.

\**Hemiramphus intermedius*. H. supernè lætè viridis, lateribus argenteis, abdomine albo, alis pallidè flavis.

D. 14; C. 15; A. 16; V. 6; P. 11; Br. 10?

Habitat. Sea, estuaries, canals.

Light green above, with silvery sides; abdomen white. Fins faint yellow.

##### SILURIDÆ.

\**Silurus punctatus*. S. supernè nitidè olivaceo-viridescens sive brunnescens, seriebus duabus punctorum nigrorum infra lineam late-

ralem; abdomine albo-flavescenti; alis dorsalibus, caudalibus analibusque nigris; ventralibus albo-flavescentibus; pectoralibus latè nigro-marginatis. Cirrhi  $\frac{2}{2}$ .

D. 5; C. 15; A. 80; P. 1 + 5; V. 14; Br. 5.

Habitat. Fresh and brackish water.

Shining olive-green or brown, with two rows of black minute dots below the lateral line. The abdominal surface yellowish white. The dorsal, caudal and anal fins black; ventrals yellowish white; pectorals the same colour, with a broad black brim.

#### APODAL MALACOPTERYGII.

##### Murænidæ.

\**Anguilla latirostris*, Yarrell.

Habitat. Fresh and brackish water.

\**Synbranchus grammicus*. S. suprâ flavo-rufescens, infra lineam lateralem albo-flavescentis, toto corpore lineis nigris inscripto.

Habitat. Streamlets, canals, estuaries.

Reddish yellow above the lateral line; beneath buff, with numerous black inscription-like lines all over the body.

#### 5. MOLLUSCA.

(Described by W. H. Benson, Esq., Bengal Civil Service.)

##### GASTEROPODA.

##### Pulmonifera. Terrestria.

*Incilaria* †, nov. gen. Corpus elongatum, posticè attenuatum, repens, undique velo marginatum. Tentacula quatuor, superioribus oculiferis, inferioribus integris. Foramen commune in latere dextro, non procul ab extremitate anticâ veli situm.

\**Incilaria bilineata*. Corpore livido, velo punctis maculisque fuscis conspersis ornato, lineis duabus lateralibus, nigrescentibus, unicâ obscuriore medianâ strigatâ. Long. ad poll.  $1\frac{1}{2}$ .

Habitat. The earth, under roots, on trees and plants.

\**Helix ravida*. Testâ subglobosâ, umbilicatâ, epidermide olivaceâ, anfractibus sex transversè subplicatis, ultimo ventricoso, suturis impressis, umbilico mediocri; aperturâ suborbiculari elongatiusculâ, labio reflexo, tenui explanato, labro acuto. Axis 1·3, diam. 1·33.

Habitat. Trees, stones, rocks, earth.

\**Helix tapeina*, Journ. Asiatic Society, vol. v. p. 352. No. 7.

Habitat. N.E. frontier of Bengal. Rare at Chusan.

\**Helix naninoides*. Testâ solidiusculâ, subdiscoideâ, supernè radiatim tenuiter striatâ, infra striis lævigatis, distantibus; spirâ depresso-conoideâ, apice obtusato, planulato; aperturâ transversè lunatâ, labro obtuso, crasso, infrâ subreflexo.

Habitat. Singapore; scarce at Chusan.

\**Clausilia pluviatilis*. Testâ fusiformi pallidè olivaceâ; spirâ attenuatâ, crystallinâ, apice papillari; anfractibus 14, medianis ventriosioribus, omnibus leviter transversè striatis; peristomate valdè

† From *incile*, a gutter, with reference to the gutter-like channel which divides the mantle from the foot.

reflexo planato, ad labii basin plicâ obliquâ solidâ, sulcoque concurrente munito. Axis 1.1 poll.

Habitat. In the earth.

\**Clausilia aculus*. Testâ subulatâ nitidâ, epidermide fusciscenti, anfractibus 10 aut 11, oblique leviter striatis; aperturâ dentibus duobus vel tribus munitâ, peristomate reflexo. Axis longior 0.65, minor 0.5 poll.

Habitat. In the earth, on mossy stones, walls and trees.

\**Achatina erecta*. Testâ albidâ solidiusculâ subulato-turritâ, epidermide fœdâ, scabrâ; anfractibus octo, planulatis, suturis impressis; apice obtuso.

Habitat. Same localities, and in company with *Clausilia aculus*. Common at Macao, where however *C. aculus* is not found.

#### AQUATICA.

\**Planorbis papyraceus*. Testâ compressâ, olivaceo-corneâ, subpolitâ, minutissimè radiato-striatâ; anfractu ultimo latiori, suprâ infrâque æqualiter convexo; peripheriâ carinatâ, spirâ basique ambabus depressis, umbilicatis, umbilico inferiori arciori; labro superiori valdè prominente, semicirculari, inferiori recedente, recto. Diam. 0.4 poll.

Habitat. Canals, ponds, attached to *Chara*.

\**Planorbis hemisphærule*. Testâ nitidâ, olivaceo-corneâ, suprâ convexâ, apice planulatâ, infrâ excavatâ, umbilico coarctato, peripheriâ obtusâ, nullo modo carinatâ. Diam. 0.25 poll.

Habitat. Same localities as *P. papyraceus* on *Chara* and *Lemna*.

*Planorbis compressus*, Hutton.

Habitat. Same localities as the preceding. Inhabits also Bengal.

\**Lymnæa plicatula*. Testâ elongato-ovatâ, corneâ, scabriusculâ; anfractu ultimo transversè plicatulâ, suturis impressis; spirâ mediocri, apice acuto plerumque ferrugineo; aperturâ infrâ patulante, basi evasâ.

Habitat. Ponds.

\**Lymnæa minor*. Testâ ovato-acutâ, corneâ, politâ; spirâ vix dimidium testæ efformante, apice obtusiusculo; anfractibus quatuor, suturis leviter impressis; aperturâ ovatâ, plicâ columellæ obsoletâ.

Habitat. Same locality as the latter.

#### TECTIBRANCHIATA.

\**Bullea caurina*. Testâ ovato-oblongâ, albâ, tenuissimâ, papyraceâ, transversè eleganter minutissimèque striatulâ; aperturâ auriformi suprâ angustatâ, infrâ patulante; labro apicem superante; spirâ nullâ.

Habitat. Said to inhabit canals.

#### PECTINIBRANCHIATA.

\**Paludina quadrata*. Testâ elongato-conoideâ, crassâ, epidermide viridi-olivaceâ, anfractibus sex planulatis, leviter transversè plicatis, longitudinaliter liratis; liris subquinis; aperturâ mediocri, intùs albidâ violaceâ; umbilico arcto, peritremate nigrescente.

Habitat. Canals and ponds.

\**Paludina lecythoides*. Testâ ovato-acutâ, olivaceâ, anfractibus sex aut septem rotundatis, transversè subplicatis; suturis excavatis; aperturâ oblongâ, peristomate subreflexo, nigro; apice acuto; umbilico ætate evanescente.

Habitat. Ditches and ponds.

\**Paludina (Bithynia, Gray) longicornis*. Testâ ovato-conoideâ, corneâ, politâ, spirâ aperturam longitudine vix superante; anfractibus quatuor, ultimo convexo, suturis minimè depressis; aperturâ subrotundâ, suprâ angulatâ; peristomate subreflexo, nigrescente; labio crassissimo; operculo testaceo, umbilico evanido; apice obtuso.

Habitat. In canals, attached to aquatic plants, stones, piles.

\**Paludina (Bithynia) striatula*. Testâ ovato-acutâ, corneâ, politâ; spirâ elongatâ; anfractibus quinque convexiusculis, liris pluribus, interdum inconspicuis, circumdatis; suturis depressiusculis; apice obtusato; peristomate reflexo nigrescenti, undato; umbilico evanido; operculo calcareo.

Habitat. Same localities as the latter.

*Laguncula*, nov. gen. Testâ turbinatâ, subglosâ, aperturâ majori, integrâ, oblongâ; peristomate interrupto; labio subreflexo; umbilico profundo tortuoso.

\**Laguncula pulchella*. Testâ albido-glaucâ, ovato-glosâ; anfractibus convexis, lineis longitudinalibus elevatusculis aliisque obliquis decussatis instructis; suturis impressis; aperturâ intus fasciâ latâ pallidè castaneâ ornatâ columellâque intus concolore.

Habitat. Said to inhabit canals.

\**Melania cancellata*. Testâ elongato-turritâ, olivaceâ, solidiusculâ, anfractibus novem convexiusculis, omnibus costulis frequentibus, ultimoque fasciis tribus elevatis basalibus munitis; costulis liris plurimis cancellatis; suturis mediocriter excavatis; apice eroso. Axis 1.0 poll. v. paulò plus.

Habitat. Canals.

\**Melania (Hemisinus? Swainson) crebricostis*. Testâ elongato-turritâ, olivaceâ, tenui, anfractibus plurimis leviter convexis; costis frequentissimis albidis, lævigatis, munitis, ultimo costulis evanidis, balteo submediano, rugisque plurimis basalibus circumdato; suturis impressis; columellâ subrectâ; basi leviter canaliculato-effusâ; labro tenui, lævi, subreflexo, apice decollato. Axis testæ decollatæ 1.05 poll.

Habitat. Found with the preceding, but scarce.

*Batillaria* †, nov. gen. Testâ turritâ, insculptâ, rudi; anfractibus plurimis; aperturâ oblongâ, infrâ angustiore, basi truncatâ, evasâ; labro sinuato, suprâ emarginato, infrâ propecto, labio suprâ callo munito; columellâ planatâ, basi incrassatâ, obliquè truncatâ, canalem vix efformante; operculo corneo, tenui, spirali, multiverticillato.

*Batillaria zonalis* (syn. *Cerithium zonale*, Lamarck, L'Océan des Antilles; *C. zonale*, Gray, China, Griff. Cuv. xii. pl. 14.). Testâ elongato-turritâ, scabrâ, albidâ, fasciis fuscis ornatâ; anfractibus tredecim,

† *Batilla*, a shovel, from the lengthened form of the shell, and the conformation of the base of the aperture.



mediocriter convexis, costulis liris longitudinalibus decussatis, supra subnodulosis; aperturâ intûs fasciis fuscis strigatâ; columellâ albâ. Axis 1·4 poll.

Habitat. The coast.

#### ACEPHALA.

#### Testacea.

\**Arca galactodes*. Testâ subrhoideâ, tumidâ, subæquilaterali, anticè subangulatâ, posticè rotundatâ, multiradiatâ; radiis exilissimis auctûs rugas decussantibus; cardine mediocri terminis exterioribus angulatis; natibus lævibus remotiusculis, incurvatis; margine lævi; epidermide fuscâ. Lat. 0·75, long. 0·5 poll.

Habitat. Said to inhabit canals.

\**Mytilus niger*. Testâ oblongâ, trigonâ; cardine unidentato; natibus subincurvatis, decorticatis, sub epidermide albis, marginibus purpurascensibus; intûs margaritaceo-splendidâ, margine purpureo. Long. 3·4 poll, lat. 1·7.

Habitat. Said to inhabit canals.

\**Dreissena purpurascens*. Testâ oblongâ subquadratâ, radiato-plicatâ, sub epidermide albo purpureoque ornatâ; intus margaritaceâ; epidermide brunneâ; apice subincurvato, compressiusculo. Long. 1·5, lat. 0·8 poll.

Habitat. Said to inhabit canals.

\**Modiola Senhousia*. Testâ transversè oblongâ, subalatâ, gibbâ, læviusculâ; anticè angustatâ, posticè dilatatâ, intûs iridescente; epidermide olivaceâ, obscurè radiatâ; alâ natibusque strigis flexuosis spadiceis ornatis; basi leviter emarginatâ. Long. 1·2, lat. 0·6 poll.

Habitat. Coasts of Chusan and Canton Province.

\**Anodon gibbum*. Testâ fragili, ovatâ, tumidâ, anticè rotundatâ, posticè subalatâ, extremitate posticâ subangulatâ; natibus concentricis rugosis, rugis parallelis, subdistantibus, areâ posticâ radiis tribus approximatis, leviter elevatis, rugosulis munitâ, margaritâ interius albidâ versus apicem aurantio-tabescente, versus marginem purpureo viridique splendide margaritaceâ; margine fusco; epidermide olivaceâ, obscurè radiatâ. Long. 2·0, lat. 3·2 poll.

Habitat. Canals.

\**Unio (Theliderma, Swainson) Leaii*, Gray. Testâ crassâ, subovatâ, compressâ, umbonibus dentibusque cardinalibus extremitati anticæ angustiori approximatis; valvæ sinistrae dente cardinali interiori margineque cardinali penè parallelis, illâ versus dentem lateralem mediocriter productum spectante; valvæ dextrae dente cardinali unico crenato; valvis intûs minimè profundis; margaritâ iridescente, pallidè salmonis colore tinctâ; natibus minimè prominentibus; rugis seriebus duabus e lineâ umbonali divaricatis, posterioribus simplicibus, anterioribus, basalibusque nodulosis, testam anteriorem munientibus; epidermide flavo-olivaceâ. Long. 2, lat. 3 poll.

Habitat. Said to inhabit fresh water at Chusan, and also Canton River.

\**Unio (Theliderma) divergens*. Testâ crassâ, angulato-ovatâ, sub-

alatâ, tumidiusculâ, facie externâ tuberculato-plicatâ, rugis seriebus duabus e lineâ umbonalis divaricantibus, posterioribus simplicioribus, anterioribus basalibusque plerumque nodulosis; natibus mediocriter prominentibus; epidermide nigrescente, striis subimbricatis. Valvæ sinistrae dente cardinali interiori versus angulum marginis posterioris basalisque spectante, ad latus exterius laminis pluribus munito, dente exteriori penè obsoleto, brevi, a basi interioris divaricato; dente laterali brevi crasso. Long. 2·65, lat. 3·5 poll.

\**Corbicula fuscata*. Testâ cordatâ subinaequilaterali, fusco-virente, tumidiusculâ, politâ, intus et ad nates violaceâ, extrinsecus sulcis crebris circumdatâ, rugis intersitis subimbricatis; margine interiori plerumque nigrescente; natibus decorticatis. Lat. 1·3, long. 1·15 poll.

Habitat. Canals.

*Venus sinensis*, Auct. Testâ orbiculatâ, convexâ, albidâ, marginibus violaceis, denticulatis, extrinsecus radiis violaceis plicisque concentricis exilissimis ornatâ; disco plerumque ferrugineo, dente cardinali postico bifido, sæpè bilobato, laminæ cardinalis extremitate posticâ concavâ. Long. 1·7, lat. 1·65 poll.

Habitat. Said to inhabit canals.

\**Sanguinolaria iridescens*. Testâ subellipticâ, compressâ, albidâ, iridescente, versus apicem incarnatâ, exilissimè transversè striatâ, striis obsoletis radiatim decussatâ; latere postico subrostrato, subangulato, antico longiore, rotundato.

Habitat. Said to inhabit canals.

\**Novaculina constricta*. Testâ albâ, tenui, transversè oblongâ, læviusculâ, extremitatibus rotundatis, radio mediano subconstrictâ, epidermide olivaceo-flavescente, posticè quasi capillis intertextis adherentibus vestitâ. Lat. 2·45, long. 0·75 poll.

Syn. *Solen constrictus*, Lamarck.

## 6. ANNELIDES.

### HIRUDINIDÆ.

\**Bdella lineata*. B. supernè brunneo-viridescens, lineâ dorsali mediâ aurantiacâ, infrâ griseo-flavescentis.

Greenish brown above, with an orange-coloured dorsal line; beneath yellowish gray.

—————? —————?

## 7. CRUSTACEA.

### DECAPODA BRACHYURA.

\**Carcinus olivaceus*. C. suprâ olivaceo-viridescens; infrâ albus; parte anteriore marginis interni femoris spinâ armatâ.

Greenish olive above; beneath white, with a single spine on the anterior part of the internal margin of the femur.

\**Sesarma tetragona*. S. supernè viridis, infrâ griseo-viridescens; brachiis manusque rubris.

Carapace green; sternum and legs greenish gray; arms and claws red.

*Sesarma quadrata*, M. Edwards.

DECAPODA MACRURA.

\**Palemon ornatus*, Olivier. P. lætè griseo-viridescens; suprâ nigro-maculatus.

Light greenish gray; carapace minutely dotted with black.

STOMAPODA UNIPELTATA.

*Squilla mantis*, Fabricius.

ENTOMOSTRACA PÆCILOPODA.

Xyphosura.

*Limulus* ——— ?

8. ARACHNIDA.

ARANEIDÆ.

\**Attus chlorommatus*. A. villosus brunneus, oculis anterioribus mediis lætè viridibus; cephalo-thoracis maculâ oculiferâ latâ nigrescente, fasciam albam mediam hastæformem circumdante, abdomine fasciâ lanceolatâ albâ ornato. Long. poll. dimid.

Hairy, brownish; the anterior centre pair of eyes light green; the broad oculiferous spot blackish, surrounding a white spear-shaped mark; the abdomen with a white lanceolate streak in the centre.

\**Thomisus albinus*. T. cephalothorace albo-virescenti, cristâ oculiferâ triangulari, aurantiaco-marginatâ, oculis ambobus anterioribus rubris; palpis maxillaribus pedibusque albo-virescentibus; abdominis albidis trapezoidis superficie superiore punctis quinque marginibusque violaceis, angulis ambobus posterioribus castaneis. Long. ad lin. tres.

Cephalothorax greenish white, with a triangular raised oculiferous crest with orange-coloured margins; anterior pair of eyes crimson; maxillary palpi and feet greenish white; abdomen whitish, in the form of a trapezium; the upper surface edged with lilac and with five lilac points, the two posterior angles chestnut-brown.

\**Thomisus bicoloratus*. T. cephalothorace, palpis pedibusque hirsutis, gramineis, abdomine albo-virescente, lineâ longitudinali mediâ duabusque transversalibus nigris, punctisque quinque nigrescentibus ornato. Long. ad lin. duas.

The hairy cephalothorax, palpi and feet grass-green; abdomen greenish white, with a longitudinal black line in the middle, divided by two short distant transversal lines and with five dark points.

\**Hypoplatea fasciata*. H. schistosa, cephalothorace nigro radiato, abdomine brunneo indistinctè fasciato, lineâ apicali nigrâ emarginatâ terminato, femoribus tibiisque nigro-fasciatis. Long. lin. sex.

Slate-coloured; cephalothorax with black radiated lines; abdomen indistinctly marked with brown, posteriorly terminated by a black notched line; femora and tibia black-banded.

\**Latrodectus* (?) *limacida* †. L. flavescenti-griseus, cephalothoracis maculâ oculiferâ majore arcuatâ nigrâ, thorace rhombulis duobus brunneis, anticè divergentibus, ornato; abdomine fasciis brunneis

† From the circumstance of its having been observed to seize the slug, *Incilaria bilineata*.

transversalibus quatuor diviso; femoribus tibiisque nigro-fasciatis; pedibus brunneis. Long. poll. 1.

Yellowish gray, with a large black arched oculiferous spot; on the thorax two anteriorly diverging brown lozenges; the abdomen with four brown transversal bands; the legs black-banded; the feet brown.

\**Uloborus curvicaudus*. U. cephalothorace, palpis maxillaribus pedibusque hirtis, flavo-brunnescentibus; abdominis cylindrici, albo-flavescentis, indistinctè nigro-marmorati extremitate posteriore acuminatâ recurvâ. Long. lin. 5.

Cephalothorax and the hairy palpi and feet brownish yellow; abdomen cylindrical, yellowish white, indistinctly marbled with black; the posterior pointed extremity bent upwards.

\**Tetragnatha ænea*. T. cephalothorace palpisque maxillaribus hirsutis, flavo brunnescentibus; femoribus tibiisque viridibus, tarsis nigris, hirsutis; abdomine conico æneo, maculis nigris duabus basalibus, lineisque nigris septem, quarum tres summæ lineâ basali anticè junctæ, ornato. Long. ad poll. dimid.

Cephalothorax and the hairy palpi brownish yellow; the hairy femora and tibiæ green; feet black; abdomen conical, green, bronze-coloured, with two black spots near the base, longitudinally striped with seven black lines, the three upper ones of which are united at the base by a black transversal line.

\**Epeïra bilineata*. E. cephalothorace femoribus pedibusque ambobus anterioribus brunneo-nigrescentibus; abdomine subfusco-canescenti, lineolis duabus undulatis nigris, posticè convergentibus, infra quas punctis summis sex; palpis maxillaribus tibiisque ambabus anterioribus subfuscis, femoribus tibiisque ambabus posterioribus subfuscis bifasciatis. Long. poll. 1.1.

Cephalothorax, thighs and feet of the two anterior pair brownish black; abdomen light grayish brown, with two waved, black, posteriorly converging lines, within which are six distant points; the maxillary palpi and tibiæ of the two anterior pair light brown, with two black bands on the joints.

\**Epeïra heraldica*. E. maculis oculiferis cephalothoracis, cano-hirsuti, nigris; abdomine brunneo-flavescente nigro-punctato, fasciis tribus, quarum anteriore coronæformi, albo-flavescentibus transversè ornato; punctis sex summis; pedibus nigris hirsutis femoribus tibiisque ambabus anterioribus albo-fasciatis. Long. poll. 1½.

Cephalothorax gray, hirsute; oculiferous spots black; abdomen yellowish brown dotted with black, with six points above and with three transversal whitish yellow bars; feet black, hirsute; the two anterior pair of femora and tibiæ with white bands.

*Epeïra fasciata*, Walckenaer.

#### HOLETRA.

\**Phalangium spiniferum*. P. supra brunneum, protuberantiâ oculiferâ triangulo flavo inclusâ, dorso flavo marginato, spinâ forti summâ armato; subtus flavo-albescens. Long. lin. 2.

Brown above; the oculiferous protuberance enclosed within a yel-

low triangle; the margins of the back spotted with yellow; the upper part of the back surmounted by a strong spine; whitish yellow beneath.

9. INSECTA.

MYRIAPODA CHILOGNATHA.

Iuloidæ.

\**Polydesmus bicolor*. P. nitidè niger, lineis dorsalibus transversalibus rubris 19, mucroneque segmenti penultimi rubro. Long. ad poll. 2.

Shining black, with nineteen red transversal lines, and the point on the penultimate segment red.

SCUTIGERIDÆ.

\**Scutigera rufipes*. S. pallidè schistosa, segmentis dorsalibus carinatis novem, abdominalibus sedecim; tarsi rufis. Long. poll. dimid.

Pale slate-coloured, with nine keeled dorsal, sixteen abdominal segments; tarsi red.

*Scolopendra morsitans*, Auct.

10. ANIMALCULA.

VOLVOCINA.

\**Gyges granulum*, Ehrenberg.

\**Sphærosira volvox*, Ehr.

CLOSTERINA.

\**Closterium trabecula*, Ehr.

\* ——— turgidum, Ehr.

\* ———? falcatum.

ASTASIAÆ.

\**Euglena longicauda*, Ehr.

DINOBYRYNA.

\**Epipyxis utriculus*, Ehr.

ARCELLINA.

\**Arcella aculeata*, Ehr.

BACILLARIA.

\**Desmidium Schwartzii*, Ehr.

\* ——— hexaceros, Ehr.

\**Xanthidium coronatum*.

\* ——— hirsutum, Ehr.

\**Arthrodesmus quadricaudatus*, Ehr.

\**Micrasterias hexagona*.

\**Euastrum margaritifera*, Eh.

\* ——— Jovis.

\* ——— integerrimum, Ehr.

\**Navicula fulva*, Ehr.

\* ——— gracilis, Ehr.

\**Navicula sigma*, Ehr.

\* ——— curvula, Ehr.

\* ——— S romanum.

\* ——— turgida, Ehr.

\**Bacillaria vulgaris*, Ehr.

\**Cocconema gibbum*, Ehr.

\* ——— cymbiforme, Ehr.

\**Gomphonema truncatum*, Eh.

\**Cocconeis pediculus*, Ehr.

\**Gaillonella nummuloides*, Eh.

\* ——— distans, Ehr.

VORTICELLINA.

\**Vorticella patellina*, Ehr.

ENCHELIA.

\**Leucophrys patula*, Ehr.

COLEPINA.

\**Coleps hirtus*, Ehr.

TRACHELINA.

\**Trachelius vorax*, Ehr.

\* ——— anas, Ehr.

\* ——— lamella, Ehr.

EUCHLANIDOTA.

\**Lepadella emarginata*, Ehr.

BRACHIONÆA.

\**Brachinus urceolaris*, Ehr.

DUBIA.